REMARKS

Claims 1 to 6 are now pending.

Applicants respectfully request reconsideration of the present application in view of this supplemental response.

With respect to paragraph two (2) of the Final Office Action, claims 1 to 6 were rejected under the first paragraph of 35 U.S.C. § 112 as to the enablement requirement.

The Final Office Action asserts that:

> [The] specification does not disclose the nature of the input [of the transfer (transmission) function] to permit calculation of the transfer function and, thus, the claims are not enabled. For example, one would need to know if the input was a step function or a pulse or some other for [sic] of input and, for example, if the input was a pulse, one would need to know things like the shape and, for example, if the input was a pulse, one would need to know things like the shape (impulse, triangle, haversine, etc.), amplitude, duration, phase, etc. . . .

(Final Office Action, page 2).

As explained in the specification, Figure 2 represents a measured signal which is analyzed to provide a series of signal segments. Each of these signal segments is then simulated. In particular, in the process step 4, each signal segment is simulated by a transmission or transfer function in the *z* plane. This transmission or transfer function has the following exemplary form:

$$He(z) = \frac{b0+blz^{-1}+b2z^{-2}}{1+alz^{-1}+a2z^{-2}+a3z^{-3}} \qquad (1)$$

In this transmission or transfer function, He(z), according to equation (1), six coefficients *b0, b1, b2, a1, a2, a3* are identified for each signal segment., which corresponds to He(z).

As admitted by the Board in its Decision, it may not understand everything about signal processing. Nevertheless, it must at least be understood -- at least by any person having ordinary skill in the art (or any first year signal processing student) -- that the transfer function represents the ratio of the output function to the input function, as disclosed by the specification.

In view of the foregoing description, any person having ordinary skill in the art as to signal processing would understand that the critical point is that the form of the input function does not matter so long as the same input function is always used as to the transfer function He(z) -- which corresponds to the signal segment to be simulated. The coefficients for the transfer function are of course obtained by simply having a number of data points for each simulated signal segment where the number corresponds to the number of coefficients, since the "signal segment" He(z) is known from the measured signal. Once the coefficients are determined *using any input function (so long as the same input function is always used)*, the simulated signal segment corresponds to He(z).

According to the Federal Circuit, an applicant does not have to expressly state information which is effectively or inherently provided or otherwise fairly deduced based on the specification to a person having ordinary skill in the art, or that represents information known to a person having ordinary skill in the art. The enablement assertions of the Final Office Action therefore reflect a misunderstanding of the subject matter of the claims and of the description provided by the specification, as would be understood by a person having ordinary skill in the art. It is therefore submitted that these assertions do not support an enablement rejection in view of the foregoing .

In particular, as to the enablement requirement under the first paragraph of 35 U.S.C. § 112, it is respectfully submitted that the standard for determining whether a patent application complies with the enablement requirement is that the specification describe how to make and use the invention -- which is defined by the claims. (See M.P.E.P. § 2164). The Supreme Court established the appropriate standard as being whether any experimentation for practicing the invention was undue or unreasonable. (See M.P.E.P. § 2164.01 (citing Mineral Separation v. Hyde, 242 U.S. 261, 270 (1916); In re Wands, 858 F.2d. 731, 737, 8 U.S.P.Q.2d 1400, 1404 (Fed Cir. 1988))).

Thus, the enablement test is "*whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation.*" (See id. (citing United States v. Teletronics, Inc., 857 F.2d 778, 785, 8 U.S.P.Q.2d 1217, 1223 (Fed. Cir. 1988))).

The Federal Circuit has made clear that there are many factors to be considered in determining whether a specification satisfies the enablement requirement, and that these

factors include but are not limited to the following: the breadth of the claims; the nature of the invention; the state of the prior art; the level of ordinary skill; the level of predictability in the art; the amount of direction provided by the inventor; the existence of working examples; and the quantity of experimentation needed to make or use the invention based on the disclosure. (See id. (citing In re Wands, 858 F.2d at 737, 8 U.S.P.Q.2d at 1404 and 1407)). In this regard, the Federal Circuit has also stated that it is "improper to conclude that a disclosure is not enabling based on an analysis of only one of the above factors," and that the examiner's analysis must therefore "consider all the evidence related to each of these factors" so that any nonenablement conclusion "must be based on the evidence as a whole." (See M.P.E.P. § 2164.01). It is respectfully submitted that the Final Office Action has not addressed these factors.

Importantly, the Office bears the initial burden of establishing why the "scope of protection provided by a claim is not adequately enabled by the disclosure." (See id. (citing In re Wright, 999 F.2d 1557, 1562, 27 U.S.P.Q.2d 1510, 1513 (Fed. Cir. 1993))). Accordingly, a specification that teaches the manner and process of making and using an invention in terms that correspond in scope to those used in describing and defining the claimed subject matter complies with the enablement requirement. (See id.).

It is believed that the Final Office Action does not meaningfully address -- as it must under the law -- whether the present application enables a person having ordinary skill in the art to practice the claimed subject matter of the claims without undue experimentation -- which it plainly does. In short, it is believed that the Final Office Action does not really address the issue of whether one having ordinary skill would have to *unduly experiment* to practice the claimed subject matter of the rejected claims -- a proposition for which the Office bears the burden of proving a prima facie case as to the rejected claims.

In this regard, to establish properly enablement or non-enablement, the Office must make use of proper evidence, sound scientific reasoning and the established law. In the case of Ex Parte Reese, 40 U.S.P.Q.2d 1221 (Bd. Pat. App. & Int. 1996), a patent examiner rejected (under the first paragraph of section 112) application claims because they were based on an assertedly non-enabling disclosure, and was promptly reversed because the rejection was based only on the examiner's subjective belief that the specification was not enabling as to the claims. In particular, the subjective assertions of the Final Office Action are simply not

supported by any real "evidence or sound scientific reasoning" -- which the law requires and which makes plain that the Office (and not an applicant) bears the burden of persuasion on an enablement rejection.

More particularly, the examiner in Ex parte Reese was reversed because the rejection had only been based on a conclusory statement that the specification did not contain a sufficiently explicit disclosure to enable a person to practice the claimed invention without exercising undue experimentation -- which the Board found to be merely a conclusory statement that only reflected the subjective and unsupported beliefs of a particular examiner and that was not supported by any proper evidence, facts or scientific reasoning. (See id.). Moreover, the Board made clear that it is "incumbent upon the Patent Office . . . to back up assertions of its own with acceptable evidence," and also made clear that "[where an] examiner's 'Response to Argument' is not supported by evidence, facts or sound scientific reasoning, [then an] examiner has not established a *prima facie* case of lack of enablement under 35 U.S.C. § 112, first paragraph." (See id. at 1222 & 1223; italics in original).

In the present case, it is respectfully submitted that the Final Office Action has not satisfied the foregoing for establishing that undue experimentation would be required, and it is therefore respectfully requested that the present rejections be withdrawn since the disclosure of the present application provides all of the information as to the input function as it concerns the transmission or transfer function that would be required by a person having ordinary skill in the art to practice the claimed subject matter.

It is therefore respectfully submitted that claim 1 and its dependent claims 2 to 6 are allowable.

CONCLUSION

In view of the foregoing, it is believed that the rejections have been obviated, and that currently pending claims 1 to 6 are allowable. It is therefore respectfully requested that the rejections be withdrawn, and that the present application issue as early as possible.

Respectfully submitted,

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